

## Title (en)

APPARATUS AND METHOD FOR SEQUENCING A NUCLEIC ACID

## Title (de)

VORRICHTUNG UND VERFAHREN ZUR SEQUENZIERUNG EINER NUKLEINSÄURE

## Title (fr)

APPAREIL ET METHODE DE SEQUENCAGE D'UN ACIDE NUCLEIQUE

## Publication

**EP 1381693 A4 20051221 (EN)**

## Application

**EP 02715174 A 20020321**

## Priority

- US 0208700 W 20020321
- US 81433801 A 20010321

## Abstract (en)

[origin: US7335762B2] Disclosed herein are methods and apparatuses for sequencing a nucleic acid. These methods permit a very large number of independent sequencing reactions to be arrayed in parallel, permitting simultaneous sequencing of a very large number (>10,000) of different oligonucleotides.

## IPC 1-7

**C12Q 1/68; C12P 19/34**

## IPC 8 full level

**G01N 33/53** (2006.01); **B01L 3/00** (2006.01); **C12M 1/00** (2006.01); **C12N 15/09** (2006.01); **C12P 19/34** (2006.01); **C12Q 1/02** (2006.01); **C12Q 1/48** (2006.01); **C12Q 1/66** (2006.01); **C12Q 1/68** (2006.01); **G01N 21/03** (2006.01); **G01N 21/64** (2006.01); **G01N 21/77** (2006.01); **G01N 21/78** (2006.01); **G01N 33/68** (2006.01); **G01N 37/00** (2006.01); **B01L 9/00** (2006.01)

## CPC (source: EP US)

**B01L 3/5027** (2013.01 - EP US); **B01L 3/502715** (2013.01 - EP US); **B82Y 15/00** (2013.01 - EP US); **B82Y 30/00** (2013.01 - EP US); **C12P 19/34** (2013.01 - EP US); **C12Q 1/6827** (2013.01 - EP US); **C12Q 1/6837** (2013.01 - EP US); **C12Q 1/6869** (2013.01 - EP US); **C12Q 1/6874** (2013.01 - EP US); **G01N 21/0303** (2013.01 - EP US); **G01N 21/6452** (2013.01 - EP US); **G01N 21/7703** (2013.01 - EP US); **B01L 9/527** (2013.01 - EP US); **B01L 2300/0636** (2013.01 - EP US); **B01L 2300/0654** (2013.01 - EP US); **B01L 2300/0816** (2013.01 - EP US); **B01L 2300/0819** (2013.01 - EP US); **B01L 2300/0822** (2013.01 - EP US); **B01L 2300/0877** (2013.01 - EP US); **B01L 2300/0893** (2013.01 - EP US)

## C-Set (source: EP US)

1. **C12Q 1/6837 + C12Q 2565/519 + C12Q 2533/101 + C12Q 2531/125**
2. **C12Q 1/6827 + C12Q 2531/125 + C12Q 2535/101 + C12Q 2565/301**
3. **C12Q 1/6837 + C12Q 2531/125 + C12Q 2535/101 + C12Q 2565/301**
4. **C12Q 1/6837 + C12Q 2565/107**
5. **C12Q 1/6837 + C12Q 2565/107 + C12Q 2525/307**
6. **C12Q 1/6869 + C12Q 2531/125 + C12Q 2535/101 + C12Q 2565/301**
7. **C12Q 1/6874 + C12Q 2565/107 + C12Q 2525/307**
8. **C12Q 1/6874 + C12Q 2531/125 + C12Q 2535/101 + C12Q 2565/301**
9. **C12Q 1/6874 + C12Q 2525/307**

## Citation (search report)

- [XY] WO 9727326 A1 19970731 - UNIV CALIFORNIA [US], et al
- [XY] WO 9850782 A2 19981112 - TUFTS COLLEGE [US], et al
- [Y] WO 9719193 A2 19970529 - UNIV YALE [US]
- [PX] WO 0120039 A2 20010322 - CURAGEN CORP [US], et al
- [PX] US 2002012930 A1 20020131 - ROTHBERG JONATHAN M [US], et al
- [XY] MICHAEL K L ET AL: "Randomly ordered addressable high-density optical sensor arrays.", ANALYTICAL CHEMISTRY. 1 APR 1998, vol. 70, no. 7, 1 April 1998 (1998-04-01), pages 1242 - 1248, XP002347880, ISSN: 0003-2700
- [XY] FERGUSON J A ET AL: "High-density fiber-optic DNA random microsphere array", ANALYTICAL CHEMISTRY 15 NOV 2000 UNITED STATES, vol. 72, no. 22, 15 November 2000 (2000-11-15), pages 5618 - 5624, XP002347881, ISSN: 0003-2700
- [X] BRAUN R M ET AL: "Spatially resolved detection of attomole quantities of organic molecules localized in picoliter vials using time-of-flight secondary ion mass spectrometry", ANALYTICAL CHEMISTRY 15 AUG 1999 UNITED STATES, vol. 71, no. 16, 15 August 1999 (1999-08-15), pages 3318 - 3324, XP002347882, ISSN: 0003-2700
- [A] FERGUSON J A ET AL: "A FIBER-OPTIC DNA BIOSENSOR MICROARRAY FOR THE ANALYSIS OF GENE EXPRESSION", NATURE BIOTECHNOLOGY, NATURE PUBLISHING, US, vol. 14, December 1996 (1996-12-01), pages 1681 - 1684, XP002071091, ISSN: 1087-0156
- [Y] HATCH A ET AL: "Rolling circle amplification of DNA immobilized on solid surfaces and its application to multiplex mutation detection.", GENETIC ANALYSIS : BIOMOLECULAR ENGINEERING. APR 1999, vol. 15, no. 2, April 1999 (1999-04-01), pages 35 - 40, XP004223009

## Cited by

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**US 2002012930 A1 20020131; US 7244559 B2 20070717**; AT E468915 T1 20100615; AU 2002247390 A1 20021008; AU 2002247390 B2 20070125; AU 2002247390 B9 20070322; CA 2441603 A1 20021003; CA 2441603 C 20120110; DE 60236502 D1 20100708; EP 1381693 A1 20040121; EP 1381693 A4 20051221; EP 1381693 B1 20100526; ES 2348435 T3 20101207; JP 2005505748 A 20050224; JP 4354184 B2 20091028; US 2003068629 A1 20030410; US 2003100102 A1 20030529; US 2003148344 A1 20030807; US 2007092872 A1 20070426; US 7264929 B2 20070904; US 7335762 B2 20080226; WO 02077287 A1 20021003

## DOCDB simple family (application)

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